

TABLE 1. DRAFT REMOVAL VOLUMES FOR VARIOUS REMEDIAL ALTERNATIVES

	Alternatives						
	2a	2b	2c	2d	2e	2f	3
	1-ft Exceed	1-ft all areas	2-ft Exceed	2-ft Removal all areas	2 ft all areas plus hot spots	3-ft Exceed	Full Removal
Total Area(sq ft)	413,337	413,337	413,337	413,337	413,337	413,337	413,337
No removal	60,611		5,192			5,115	5,115
1-foot removal	352,726	413,337	19,671			8,628	8,628
2-foot removal			388,474	413,337	413,337	80,613	77,350
3-foot removal					Need Area	318,981	86,069
4-foot removal							139,373
5-foot removal							96,802
Excavation Area (sq ft)	352,726	413,337	408,145	413,337	413,337	408,222	408,222
Volume (CY)	13,100	15,400	29,600	30,700		41,800	54,200

Alternative 2c-2ft Removal of Exceedances			
	Unit	Dredging of Dry Sediment	Hydraulic Dredging
Volume Removed	cubic ft	816,290	816,290
	cubic yard	30,200	30,200
Excavation rate	cy/hr	130	
	cy/day	1040	300
Excavation Duration	day	29	101

Alternatives:

- 2a** 1-foot where COCs exceed criteria
- 2b** 1-foot Bank-to-Bank
- 2c** 2-foot where COCs exceed criteria
- 2d** 2-foot Bank-to-Bank
- 2e** 2-foot Bank-to-Bank plus hot spots to 3-foot
- 2f** 3-foot where COCs exceed criteria
- 3** Full Removal (to 5 feet)

Table 2. Cost Estimate Summary for Yosemite Creek Alternative 2c, 2-foot Removal of Exceedances

	Tasks	Dredging of Dry Sediment	Hydraulic Dredging	Difference
Preconstruction	Site Preparation	\$205,800	\$400,000	-\$194,200
Health and Safety	Health and Safety	\$96,700	\$168,500	-\$71,800
Construction Phase	Construction Costs	\$67,300	\$130,700	-\$63,400
	Site Dewatering	\$1,744,800		\$1,744,800
	Contaminated Sediment Removal	\$605,400	\$2,312,600	-\$1,707,200
	Sediment Dewatering	\$1,041,900	\$2,188,000	-\$1,146,100
	Transportation and Disposal of Dewatered Sediment	\$5,273,800	\$5,273,800	\$0
	Treatment of Dewatering Process Water	\$248,800	\$333,700	-\$84,900
	Discharge of Dewatering Process Water to SFPUC	\$22,300	\$14,500	\$7,800
	Capping	\$3,106,600	\$3,106,600	\$0
	(subtotal of Construction phases)	\$12,110,900	\$13,359,900	-\$1,249,000
Post Construction	Post Construction Costs	\$59,500	\$59,500	\$0

	Capital Cost Subtotal	\$12,472,900	\$13,987,900
Adjusted Capital Cost Subtotal for San Francisco, CA Location Factor (123.4):	\$15,391,600	\$17,261,100	
10% Legal and Administrative Fees	\$1,539,200	\$1,726,200	
20% Contingencies:	\$3,078,400	\$3,452,300	
Construction Management (2.5% of total capital cost) Includes submittals, reporting, meetings	\$384,800	\$431,600	
Engineering Design 10 % of Construction Costs	\$1,539,200	\$1,726,200	
Total Capital Costs in 2012 Dollars:	\$21,934,000	\$24,598,000	

Table 3. Performance Schedule Assumption for Dry Sediment Excavation, Alternative 2c, 2-foot Removal of Exceedances

Phases	Duration (days)	Note
Mobilization	5	
Sediment Excavation & Dewatering & Treatment	34	The total volume removed for 2-ft Alternative is 28776 CY, the excavation rate is 130 CY/HR. Assume 8 hours per day, 5 days per week. Add 5 days for dewatering and treatment process.
Treated Water Discharge Permitting	5	
Capping	10	
Demobilization	5	
(Total)	59	
Performance Schedule Assumption for Hydraulic Assumption		
Phases	Duration (days)	Note
Mobilization	5	
Sediment Excavation & Dewatering & Treatment	106	The total volume removed for 2-ft Alternative is 28776 CY, the excavation rate is 300 cy/day. Add 5 days for dewatering and treatment process.
Treated Water Discharge Permitting	5	
Capping	10	
Demobilization	5	
(Total)	131	

**Table 4. Cost Estimate for Excavation Technology for Alternative 2c, 2ft Removal of Exceedances
Yosemite Slough Site, San Francisco, CA**

Item Description	Comment	Unit	Quantity	Unit Cost	Cost	Reference
Capital Cost						
Preconstruction/Site Preparation						
Surveying Crew	2012 RS Means Crew A-7, 8hr/day; assume 100% of project duration	Day	60	\$1,863.37	\$111,802	2012 Means Site Work and Landscape Cost Data 31st Ed. Crew A-7
Cut and Chip Trees	Trees to 6" dia.; assume acreage for haul roads	Acre	1	\$4,375.00	\$4,375	2012 Means Site Work and Landscape Cost Data 31st Ed. 31 11 10.10-0020
Grub Stumps and Remove	Trees to 6" dia.; assume acreage for haul roads	Acre	1	\$1,875.00	\$1,875	2012 Means Site Work and Landscape Cost Data 31st Ed. 31 11 10.10-0150
Install Fence	Chain link industrial, 6' H, 6 gauge wire with 3 strands barb wire; around staging area	LF	3000	\$28.50	\$85,500	2012 Means Site Work and Landscape Cost Data 31st Ed. 32 31 13.20-0500
Gate	Double swing gates, includes posts with 12' opening	Each	2	\$730.00	\$1,460	2012 Means Site Work and Landscape Cost Data 31st Ed. 32 31 13.20-5060
Signs	Reflectorized 24"x 24" sign mounted to fence	Each	4	\$190.50	\$762	2012 Means Site Work and Landscape Cost Data 31st Ed. 10 14 53.20-0100; increase by 50% for text customization
Subtotal					\$205,800	
Health and Safety						
Construct Decontamination Pad & Containment	For equipment and personnel	Setups	2	\$3,500.00	\$7,000	Engineer's Estimate
Water Supply for Decontamination	Assume daily water need for decontamination process is 10,000 gallons.	thousand gallons	590	\$1.50	\$886	American Water Works Association. Average water price of \$1.50 per thousand gallons.
Community/Exclusion Zone Air Monitoring	Particulate meter purchase (Qty 4)	Each	4	\$7,200.00	\$28,800	Industrial Environmental Monitoring Instruments, http://www.ierents.com/ as of January 2012
Site Safety Officer	10 hrs./day, 5days/wk., \$100/hr.; 100% of project duration	manweeks	12	\$5,000.00	\$60,000	Engineer's Estimate
Subtotal					\$96,700	

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Construction Mob/Demob						
Construction Oversight	10 hrs./day, 5days/wk., \$100/hr.; 100% of project duration	manweeks	12	\$5,000.00	\$60,000	Engineer's Estimate
Mobilization for Dry Excavation Equipment	Up to 25 mile haul distance; 2 loader, 2 excav., 1 grader, 1 paver, and 2 Trucks above 150 H.P.,	Each	8	\$455.00	\$3,640	2012 Means Site Work and Landscape Cost Data 31st Ed. 01 54 36.50-0100
Demobilization for Dry Excavation Equipment	Up to 25 mile haul distance; 2 loader, 2 excav., 1 grader, 1 paver, and 2 Trucks above 150 H.P.,	Each	8	\$455.00	\$3,640	2012 Means Site Work and Landscape Cost Data 31st Ed. 01 54 36.50-0100
Subtotal					\$67,300	
Site Dewatering						
Mobilization and Demobilization of Cofferdam Construction Equipment		LS	1	\$10,000.00	\$10,000	Engineer's Estimate
Cofferdam Construction and Removal	Soldier beams & lagging H piles with 3" wood sheeting horizontal between piles, including removal of wales and braces, no hydrostatic head, 36' - 45' deep with 4 lines of braces, 14" H. Depth needed is based on the Geotechnical study results. Assume length needed is 1000' across the mouth of the Slough.	SF	36000	\$46.50	\$1,674,000	2012 Means Site Work and Landscape Cost Data 31st Ed. 31 52 16.10-1000
Resuspension Control (Silt Curtain)	Silt curtain installation and removal, needed during installation of cofferdam.	LF	1000	\$10.00	\$10,000	Engineer's Estimate
Dewatering	Pumping 8 hr., attended 8 hrs., including 20 L.F. of suction hose & 100 L.F. discharge hose, 6"centrifugal pump	Day	34	\$1,150.00	\$39,144	2012 Means Site Work and Landscape Cost Data 31st Ed. 31 23 19.20-1100
Additional Dewatering Pump	add per additional pump	Day	34	\$340.00	\$11,573	2012 Means Site Work and Landscape Cost Data 31st Ed. 31 23 19.20-1120
Subtotal					\$1,744,800	

**Table 4. Cost Estimate for Excavation Technology for Alternative 2c, 2ft Removal of Exceedances
Yosemite Slough Site, San Francisco, CA**

Contaminated Sediment Removal (Sediment Excavation, Transport, and Stockpiling)						
Timber Crane Mats for Slough Access	Cost for timber mat material. Assume the Yosemite Slough width is 300 ft., the number of pieces of Mat needed to cross the Slough is: 300 ft./4ft =75. Assume 200 mats needed for the entire project.	Each	200	\$785.00	\$157,000	The Mat Source: http://www.thematsource.com/mat-inventory/timber-mats.html . Douglas Fir Crane Mats (12 in *4 ft. * 20 ft.), each mat consists of 4 timbers. Accessed in June 2012.
Timber Crane Mats Relocation	Cost is for adjusting and relocating timber mats as needed during the excavation phase of the project.	Day	34	\$1,394.18	\$47,456	2012 Means Site Work and Landscape Cost Data Crew B-11 M
Excavation of Sediment	Backhoe, hydraulic, 2 CY bucket = 130 CY/hr.	BCY	30,200	\$1.80	\$54,360	2012 Means Site Work and Landscape Cost Data 31st Ed. 31 23 16.42-0260
Loading sediment onto trucks	add 15%	BCY	30,200	\$0.27	\$8,154	2012 Means Site Work and Landscape Cost Data 31st Ed. 31 23 16.42-0020
Add long reach boom/arm for excavator	all other equipment add 50%	BCY	30,200	\$0.90	\$27,180	2012 Means Site Work and Landscape Cost Data 31st Ed. 31 23 16.42-4250
Transport Sediment to Stockpile (staging area)	8 C.Y. truck, 15 MPH ave, cycle 1 mile, 30 min wait/Ld./ Uld.	LCY	34,730	\$7.35	\$255,266	2012 Means Site Work and Landscape Cost Data 31st Ed. 31 23 23.20-0414
Stockpiling of Dredged Sediment	300 Horsepower Bulldozer w/ 50' haul	LCY	34,730	\$1.61	\$55,915	2012 Means Site Work and Landscape Cost Data 31st Ed. 31 23 16.46-5020
Subtotal					\$605,400	
Sediment Dewatering						
Mechanical Dewatering System and Dewatered Sediment Stockpiling	including debris removal, generator, shakers, belt press	LCY	34,730	\$30.00	\$1,041,900	Engineer's Estimate
Subtotal					\$1,041,900	

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Yosemite Slough Site, San Francisco, CA**

Transportation and Disposal of Dewatered Sediment						
Loading Sediment onto Trucks	Front End Loader, 5 CY bucket	LCY	34,730	\$1.85	\$64,251	2012 Means Site Work and Landscape Cost Data 31st Ed. 312316.42-1350
Offsite Disposal of Class II, Non-PCB Sediment						
Transportation	Dump truck transport from Yosemite Slough to Landfill; incl taxes and fees	Ton	52,095	\$50.00	\$2,604,750	Engineer's Estimate, To be updated once we receive a quote from the landfill
Disposal	Disposal at Landfill; incl taxes and fees	Ton	52,095	\$50.00	\$2,604,750	Engineer's Estimate, To be updated once we receive a quote from the landfill
Offsite Disposal of Non-RCRA, Non-PCB Containing Sediment						
Transportation	Dump truck transport from Yosemite Slough to Landfill; incl taxes and fees	Ton		\$50.00	\$0	Engineer's Estimate, To be updated once we receive a quote from the landfill
Disposal	Disposal at Landfill; incl taxes and fees	Ton		\$50.00	\$0	Engineer's Estimate, To be updated once we receive a quote from the landfill
Offsite Disposal of Class II Waste, PCB containing Sediment						
Transportation	Dump truck transport from Yosemite Slough to Landfill; incl taxes and fees	Ton		\$50.00	\$0	Engineer's Estimate, To be updated once we receive a quote from the landfill
Disposal	Disposal at Landfill; incl taxes and fees	Ton		\$50.00	\$0	Engineer's Estimate, To be updated once we receive a quote from the landfill
Offsite Disposal of Non-RCRA, Non-PCB Sediment						
Transportation	Dump truck transport from Yosemite Slough to Landfill; incl taxes and fees	Ton		\$50.00	\$0	Engineer's Estimate, To be updated once we receive a quote from the landfill
Disposal	Disposal at Landfill; incl taxes and fees	Ton		\$50.00	\$0	Engineer's Estimate, To be updated once we receive a quote from the landfill
Offsite Disposal of TSCA Sediment						
Transportation	Dump truck transport from Yosemite Slough to Landfill; incl taxes and fees	Ton		\$50.00	\$0	Engineer's Estimate, To be updated once we receive a quote from the landfill
Disposal	Disposal at Landfill; incl taxes and fees	Ton		\$50.00	\$0	Engineer's Estimate, To be updated once we receive a quote from the landfill
Subtotal					\$5,273,800	

**Table 4. Cost Estimate for Excavation Technology for Alternative 2c, 2ft Removal of Exceedances
Yosemite Slough Site, San Francisco, CA**

<i>Treatment of Dewatering Process Water</i>						
FRAC Tank Rental; for "holding tank" of water	4 x 21,000 Tank with Cleaning	Day	35	\$800.00	\$28,000	Engineer's Estimate
Rain for Rent dewatering process water treatment system mobilization	process involves a settling tank, sand filtration, bag filter, carbon filter, resins/Organoclay, holding tank for testing	Each	1	\$75,000.00	\$75,000	Oakley Rain for Rent Quote from Tony DeBellis (2012)
Rain for Rent dewatering process water treatment system spent media disposal and replacement	cost is 125% of cost for mobilization for each media replacement	Each	1	\$93,750.00	\$93,750	Oakley Rain for Rent Quote from Tony DeBellis (2012)
Treatment System Operations	One operator	Day	35	\$562.00	\$19,670	2012 RSMeans Site Work and Landscape Cost Data 31 23 23.17 0190
Characterization/Monitoring Sampling of Dewatering Process Water	Including pH, TDS, TSS, COD, Metals, PCBs. Assume one sample is needed every 10000 CF of processed water.	Each	32	\$1,000.00	\$32,355	Engineer's Estimate
Subtotal					\$248,800	
<i>Discharge of Dewatering Process Water to SFPUC</i>						
Permit Fee		Each	1	\$1,000.00	\$1,000	SFPUC Requirements for Batch Wastewater Discharges (2008)
Batch Discharge to SFPUC	Sewer service charge is per 100 cubic feet discharged	CF	3,235	\$6.56	\$21,225	SFPUC Requirements for Batch Wastewater Discharges (2008)
Subtotal					\$22,300	
<i>Capping</i>						
Capping Material Transportation	Assume the amount of material needed is equal to the amount sediment removed. Assume material is 1.5 ton/CY based on data from the Geotechnical Study	Ton	52,095	\$50.00	\$2,604,750	Engineer's Estimate. Source of material has not been identified at this time.
Capping Installation	Assume the amount of material needed is equal to the amount sediment removed. Labor Only	LCY	34,730	\$10.00	\$347,300	Engineer's Estimate
Capping Installation	Equipment Costs, 2-1/2 CY FE Loader, 300 HP, 300' Haul, with Dozer	LCY	34,730	\$4.45	\$154,549	2012 RSMeans Site Work and Landscape Cost Data 31 23 23.17 0190
Subtotal					\$3,106,600	

**Table 4. Cost Estimate for Excavation Technology for Alternative 2c, 2ft Removal of Exceedances
Yosemite Slough Site, San Francisco, CA**

Post Construction Costs						
Site Restoration for Access Roads	grading of access roads	Day	2	\$1,048.64	\$2,097	2012 Means Site Work and Landscape Cost Data Crew B-10L - 0.5 laborer = 1264.64- 216
Site Restoration for Staging Area	Plant-mix Asphalt Paving with wearing course 2.5" thick	SY	4840	\$11.85	\$57,354	2014 Means Site Work and Landscape Cost Data 31st Ed. 31 12 16.13-0420
Subtotal					\$59,500	
Capital Costs Subtotal:					\$12,472,900	
Adjusted Capital Cost Subtotal for San Francisco, CA Location Factor (123.4):					\$15,391,600	
10% Legal and Administrative Fees					\$1,539,200	
20% Contingencies:					\$3,078,400	
Construction Management (2.5% of total capital cost)					\$384,800	Engineer's Estimate
Engineering Design (10 % of total capital cost)					\$1,539,200	Engineer's Estimate
Total Capital Costs in 2012 Dollars:					\$21,934,000	
Periodic (5-year) Monitoring						
Institutional Controls	Easement, fencing, signs	LS	1	\$5,000.00	\$5,000	Engineer's Estimate
Site Monitoring		LS	1	\$20,000.00	\$20,000	Engineer's Estimate
Reporting		LS	1	\$10,000.00	\$10,000	Engineer's Estimate
5-Year Cost Subtotal:					\$35,000	
Adjusted Capital Cost Subtotal for San Francisco, CA Location Factor (123.4):					\$43,190	
10% Legal and Administrative Fees					\$4,319	
20% Contingencies:					\$8,638	
5-Year Total:					\$56,147	
30-Year Present Worth of Periodic Costs:					\$157,000	

**Table 4. Cost Estimate for Excavation Technology for Alternative 2c, 2ft Removal of Exceedances
Yosemite Slough Site, San Francisco, CA**

Assumptions

1. Project duration	59	days	(see 'Performance Schedule Assumption')
2. Perimeter around staging area	3000	ft.	
3. Daily water need for decontamination	10	thousand gallons	
4. Total days of excavation, dewatering and treatment	34	days	(see 'Performance Schedule Assumption')
5. Total volume removed	30,200	CY	(see " Volume Calculation")
6. Volume of treated water (Assume the sediment dredged contains 30% of water)	244620	CF	
7. Total days of Capping	10	days	
8. Staging Area size	13	Acre	

9. The surveying crew will be needed for the entire project duration to compete a pre-excavation, post-excavation, and post capping surveys and to assist the excavation crew.
10. 1 acre will be needed for access road preparation.
11. The cofferdam needed is 1000' (length) by 36' (depth). Assume that a silt curtain will be in place during the installation and removal of the cofferdam.
12. Assume 10,000 gallons of water needed daily for decontamination. Assume this water will be treated by the dewatering process water treatment facility.
13. 8 hours per day, 5 days per week with \$100/hour for manpower performance.
14. The equipment need for Mobilization are 2 loader, 2 excavator, 1 grader, 1 paver and 2 trucks.
15. 200 timber crane mats are needed for the entire project.
16. The sediment will increase in volume by 15% when removed from the Slough and compaction force is removed.
17. The Waste Characterization Study will be sufficient for characterization sampling of dewatered sediment, and additional sampling is not necessary.
18. One sample is needed every 10000 CF of processed water.
19. The Suspended Solids, Oil/Grease and COD are removed during the sediment dewatering process.
20. 1 acre of the staging area will require pavement restoration post construction.
21. Assume that there is a manhole located onsite discharge of treated dewatering process water.
22. Assume there is a fire hydrant onsite for the supply of decon water.

LF = Linear Foot
SY = Square Yard
BCY = Bank Cubic Yard
LCY = Loose Cubic Yard
LS = Lump Sum
SF = Square Feet
CF = Cubic Feet

**Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California**

		Analyte							
		TTLTC Metals					Total PCBs	TPH	
		Chromium	Lead	Molybdenum	Zinc	Mercury	Calculated PCB concentration based upon 2.3X total congeners	as Diesel	as Motor Oil
Action Level		370	218		410	1.87	1240	500	2,500
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	mg/kg	mg/kg
Sample ID	Sample Date								
YC-001-1	07/01/09	36.9	20.5		40.2	0.052	41	0	0
YC-001-2	07/01/09	30.9	15.9		38	0.073	0	0	0
YC-001-3	07/01/09	66.9	24		83.8	0.044	9.6	0	0
YC-001-4	07/01/09	98.9	124		167	0.50	240	0	0
YC-002-1	07/01/09	182	269		407	1.2	130	140	430
YC-002-2	07/01/09	796	746		730	1.4	16,000	640	850
YC-002-3	07/01/09	42.4	31		51.4	0.17	400	41	110
YC-802-3	07/01/09	52	36.9		70.3	0.20	340	32	79
YC-002-4	07/01/09	58.6	26.7		71.3	0.25	46	16	27
YC-002-5	07/01/09	55.1	8		43.4	0.12	0	0	0
YC-003-1	06/29/09	318	891		394	0.29	3,900	680	1700
YC-003-2	06/29/09	72	44.2		98.6	0	220	30	84
YC-803-2	06/29/09	82.8	156		198	0	360	0	0
YC-003-3	06/29/09	47.1	26		67.4	0.057	4.7	0	0
YC-003-4	06/29/09	29.4	8.2		31.5	0.048	0	0	0
YC-003-5	06/29/09	68.4	8.3		65.1	0	0	0	0

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Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California**

		Chromium	Lead	Molybdenum	Zinc	Mercury	Calculated PCB concentration based upon 2.3X total congeners	as Diesel	as Motor Oil
Action Level		370	218		410	1.87	1240	500	2,500
YC-004-1	07/02/09	145	203		286	0.37	660	640	2400
YC-004-2	07/02/09	249	584		762	0.97	16,000	1100	3000
YC-004-3	07/02/09	39.6	14.7		40.2	0.13	67	0	0
YC-005-1	07/07/09	165	439		378	0.26	9,900	340	1100
YC-005-2	07/07/09	222	539		448	0.61	29,000	3100	9100
YC-805-2	07/07/09	219	563		474	0.31	22,000	1100	3400
YC-005-3	07/07/09	43.5	28.6		54.1	0.4	580	96	280
YC-005-4	07/07/09	58.5	8.5		42.1	0.088	4.7	26	47
YC-005-5	07/07/09	58.7	5.4		52	0	0	0	0
YC-006-1	06/29/09	125	161		242	0.71	240	15	54
YC-006-2	06/29/09	134	175		251	0.49	4,200	51	160
YC-006-3	06/29/09	50.1	67.1		77.6	0.28	280	10	26
YC-006-4	06/29/09	39.8	16.2		47.5	0.078	180	0	0
YC-006-5	06/29/09	38.1	4.1		42.3	0.037	19	0	0
YC-007-1	07/07/09	291	724		500	1	19,000	400	1800
YC-007-2	07/07/09	79.4	102		114	0.16	960	82	350
YC-007-3	07/07/09	52.8	17.6		66.2	0.082	37	20	42
YC-807-3	07/07/09	47.7	21.7		54.9	0.047	62	13	28
YC-007-4	07/07/09	35.3	5.5		29.4	0.083	5.2	16	34
YC-007-5	07/07/09	25.1	3.2		32.3	0	6.8	0	0
YC-008-1	07/02/09	99.8	139		205	0.23	490	86	260
YC-008-2	07/02/09	462	702		713	1	31,000	430	1400
YC-008-3	07/02/09	411	587		761	0.67	11,000	460	1200
YC-008-4	07/02/09	268	658		1130	0.72	580	510	1600
YC-008-5	07/02/09	119	309		509	0.92	240	380	960

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		Chromium	Lead	Molybdenum	Zinc	Mercury	Calculated PCB concentration based upon 2.3X total congeners	as Diesel	as Motor Oil
Action Level		370	218		410	1.87	1240	500	2,500
YC-009-1	06/25/09	112	137		212	0.61	61	0	0
YC-009-2	06/25/09	111	191		252	0.51	380	17	56
YC-009-3	06/25/09	46	36.9		64.5	0.24	9,300	9	21
YC-009-4	06/25/09	37.3	9.2		34.2	0.1	2.9	0	0
YC-009-5	06/25/09	63	77		126	0.58	100	10	25
YC-010-1	07/09/09	534	1000		759	0.96	64,000	970	3100
YC-010-2	07/09/09	73.6	191		177	0.25	2,100	46	240
YC-010-3	07/09/09	40.5	8		40.1	0.1	37	38	71
YC-810-3	07/09/09	45.3	20.8		62.5	0.22	41	35	66
YC-010-4	07/09/09	18.4	1.6		21.1	0.062	0	0	0
YC-011-1	06/25/09	109	178		239	0.83	390	67	130
YC-011-2	06/25/09	263	783		649	1.1	2,400	190	380
YC-811-2	06/25/09	274	814		666	1.5	1,600	96	190
YC-011-3	06/25/09	328	915		1490	0.83	17,000	5900	0
YC-011-4	06/25/09	46.3	54.9		81.1	0.21	180	26	0
YC-011-5	06/25/09	33.9	8.4		29.8	0.094	24	0	0
YC-012-1	06/25/09	283	1130		806	1.3	1,500	72	170
YC-012-2	06/25/09	220	290		225	0.73	7,200	110	210
YC-012-3	06/25/09	129	440		415	0.64	360	51	83
YC-012-4	06/25/09	42.4	23.2		53.8	0.13	37	16	29
YC-012-5	06/25/09	30.4	3.4		32.5	0.043	0	0	0
YC-013-1	06/24/09	128	267		312	0.57	960	32	120
YC-013-2	06/24/09	155	619		364	1.1	9,600	130	200
YC-013-3	06/24/09	64.4	195		193	0.32	4,600	47	120
YC-013-4	06/24/09	48.1	24.2		58.6	0.18	140	13	45
YC-813-4	06/24/09	44.7	26.2		60.1	0.14	110	8.5	29
YC-013-5	06/24/09	39.8	5.2		47.5	0.091	46	0	0

**Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California**

		Chromium	Lead	Molybdenum	Zinc	Mercury	Calculated PCB concentration based upon 2.3X total congeners	as Diesel	as Motor Oil
Action Level		370	218		410	1.87	1240	500	2,500
YC-014-1	06/25/09	140	213		321	1.1	220	56	130
YC-014-2	06/25/09	291	455		417	1.1	5,800	25	51
YC-014-3	06/25/09	144	458		415	0.81	530	130	250
YC-014-4	06/25/09	47.9	44		68.5	0.24	68	22	35
YC-814-4	06/25/09	46.8	27.4		53.3	0.18	76	15	22
YC-014-5	06/25/09	50	4.3		42.7	0.053	0	0	0
YC-015-1	07/07/09	188	619		668	0.71	9,500	710	2400
YC-015-2	07/07/09	270	937		516	1.7	82,000	2300	6100
YC-015-3	07/07/09	69.4	129		122	0.13	5,500	130	400
YC-015-4	07/07/09	33.3	8.3		30.4	0.06	110	14	27
YC-015-5	07/07/09	64.2	7.3		61.6	0	60	0	0
YC-016-1	07/01/09	87.8	288		341	0.36	2,300	67	140
YC-016-2	07/01/09	159	697		594	0.65	6,200	570	1000
YC-016-3	07/01/09	116	193		265	0.62	290	47	120
YC-017-1	06/23/09	131	182		261	0.41	530	29	95
YC-817-1	06/23/09	170	258		350	0.39	240	170	510
YC-017-2	06/23/09	252	449		507	0.27	660	80	150
YC-017-3	06/23/09	164	427		508	0.22	950	68	150
YC-017-4	06/23/09	60.8	38.1		93.7	0.14	57	13	21
YC-017-5	06/23/09	39.2	6.3		30.7	0.077	0	0	0
YC-018-1	06/23/09	97.6	262		454	0.53	540	55	87
YC-018-2	06/23/09	161	722		681	0.55	13,000	210	690
YC-018-3	06/23/09	229	394		351	0.26	9,200	200	520
YC-018-4	06/23/09	272	460		573	0.42	3,300	440	920
YC-818-4	06/23/09	270	448		580	0.56	2,900	440	1100
YC-018-5	06/23/09	127	428		522	0.36	460	360	1000

**Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
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		Chromium	Lead	Molybdenum	Zinc	Mercury	Calculated PCB concentration based upon 2.3X total congeners	as Diesel	as Motor Oil
Action Level		370	218		410	1.87	1240	500	2,500
YC-019-1	06/22/09	125	254		328	0.63	420	76	120
YC-019-2	06/22/09	257	809		644	0.51	2,800	250	440
YC-019-3	06/22/09	148	409		394	0.22	440	150	220
YC-019-4	06/22/09	83.6	86.2		154	0.23	70	27	43
YC-019-5	06/22/09	48.8	11.7		45	0.076	0.86	0	0
YC-020-1	06/22/09	99	127		210	0.58	100	26	38
YC-820-1	06/22/09	98.2	106		192	0.41	160	19	62
YC-020-2	06/22/09	87.9	271		296	0.47	420	270	4900
YC-020-3	06/22/09	223	483		448	0.76	1,500	200	410
YC-020-4	06/22/09	171	453		458	0.85	170	170	310
YC-020-5	06/22/09	112	426		387	0.58	140	54	99
YC-021-1	06/22/09	94.1	154		215	0.34	150	39	140
YC-021-2	06/22/09	169	320		336	0.16	1,200	44	96
YC-021-3	06/22/09	262	530		478	0.37	2,500	73	250
YC-021-4	06/22/09	208	525		582	0.39	2,000	220	530
YC-021-5	06/22/09	168	248		458	0.34	400	99	340
YC-022-1	06/22/09	59.6	70.1		131	0.25	100	42	64
YC-022-2	06/22/09	66.5	137		197	0.2	160	230	350
YC-022-3	06/22/09	300	178		278	0.5	200	31	50
YC-022-4	06/22/09	162	333		400	0.51	1,300	80	140
YC-022-5	06/22/09	153	307		371	0.58	1,000	200	400
YC-023-1	06/18/09	91.5	156		213	0.68	480	25	57
YC-023-2	06/18/09	426	561		517	0.97	2,600	61	140
YC-023-3	06/18/09	188	288		422	0.71	310	95	270
YC-023-4	06/18/09	51.8	8.3		52.7	0.036	2.1	20	40
YC-023-5	06/18/09	58.4	4.4		53.6	0.053	0	0	0
YC-823-5	06/18/09	59.2	5.1		60.7	0.034	0	0	0

Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

		Chromium	Lead	Molybdenum	Zinc	Mercury	Calculated PCB concentration based upon 2.3X total congeners	as Diesel	as Motor Oil
Action Level		370	218		410	1.87	1240	500	2,500
YC-024-1	06/22/09	123	280		320	0.54	1,100	140	190
YC-024-2	06/22/09	189	509		629	0.71	1,200	74	93
YC-024-3	06/22/09	276	457		485	0.64	470	220	270
YC-824-3	06/22/09	240	393		406	0.29	1,000	97	340
YC-024-4	06/22/09	175	218		407	0.79	61	69	110
YC-024-5	06/22/09	82.9	49.2		119	0.33	17	0	0
YC-025-1	06/18/09	106	204		271	0.46	1,200	52	140
YC-025-2	06/18/09	287	439		391	0.60	2,800	68	180
YC-025-3	06/18/09	194	363		404	0.65	1,300	63	140
YC-825-3	06/18/09	322	361		403	0.55	1,200	270	290
YC-025-4	06/18/09	134	103		225	0.50	110	38	91
YC-025-5	06/18/09	74.9	12.9		80.5	0.12	19	11	22
YC-026-1	06/18/09	218	1210		613	0.77	2,000	120	450
YC-026-2	06/18/09	262	495		474	0.97	1,600	62	140
YC-026-3	06/18/09	133	108		221	0.80	96	33	85
YC-026-4	06/18/09	135	99.8		219	0.45	140	12	28
YC-026-5	06/18/09	64.1	21.6		73.6	0.084	14	0	0
YC-027-1	06/18/09	132	491		355	0.67	4,500	45	110
YC-027-2	06/18/09	244	545		450	0.78	1,400	95	160
YC-027-3	06/18/09	197	219		331	0.65	84	21	51
YC-027-4	06/18/09	64	6.6		61.5	0.061	0	0	0
YC-027-5	06/18/09	70.7	15.8		71.9	0.078	0	0	0
YC-028-1	06/17/09	118	176		253	0.53	500	29	69
YC-028-2	06/17/09	245	620		484	0.73	2,800	62	160
YC-028-3	06/17/09	232	347		394	0.82	490	40	98
YC-028-4	06/17/09	141	95.5		215	0.48	91	16	41
YC-028-5	06/17/09	60.5	16		60.6	0.12	26	0	0

**Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California**

		Chromium	Lead	Molybdenum	Zinc	Mercury	Calculated PCB concentration based upon 2.3X total congeners	as Diesel	as Motor Oil
Action Level		370	218		410	1.87	1240	500	2,500
YC-029-1	07/06/09	121	141		234	0.62	820	76	230
YC-029-2	07/06/09	268	451		584	0.91	4,100	250	870
YC-029-3	07/06/09	300	709		519	0.83	13,000	1100	3400
YC-829-3	07/06/09	307	678		542	0.46	15,000	1000	3100
YC-029-4	07/06/09	245	289		347	0.66	9,000	290	1000
YC-029-5	07/06/09	56.2	35.9		81.2	0.44	340	66	230
YC-030-1	07/06/09	139	164		250	0.58	1,700	110	340
YC-030-2	07/06/09	235	682		633	0.74	5,000	260	920
YC-030-3	07/06/09	267	453		445	0.55	32,000	470	1500
YC-030-4	07/06/09	231	201		338	0.61	4,200	340	1200
YC-030-5	07/06/09	83.7	34.8		100	0.3	150	21	66
YC-031-1	07/07/09	146	249		321	0.38	2,400	410	1300
YC-031-2	07/07/09	247	567		559	0.57	17,000	1300	3700
YC-031-3	07/07/09	75.4	102		147	0.28	4,700	190	630
YC-831-3	07/07/09	81.5	123		166	0.15	4,800	130	340
YC-031-4	07/07/09	45.8	16.7		47.9	0.11	130	21	36
YC-031-5	07/07/09	38.5	5.7		32.3	0	20	0	0

**Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California**

		Chromium	Lead	Molybdenum	Zinc	Mercury	Calculated PCB concentration based upon 2.3X total congeners	as Diesel	as Motor Oil
Action Level		370	218		410	1.87	1240	500	2,500
YC-032-1	07/07/09	310	978		835	0.97	28,000	910	2600
YC-032-2	07/07/09	443	882		828	0.84	57,000	2800	5000
YC-032-3	07/07/09	47.6	56.6		68	0.12	1,000	88	290
YC-032-4	07/07/09	47	4.4		32.9	0.042	110	14	22
YC-032-5	07/07/09	40.2	3.5		45.8	0	0	0	0
YC-033-1	07/08/09	95.4	148		209	0.46	490	19	190
YC-833-1	07/08/09	103	179		247	0.54	1,500	57	140
YC-033-2	07/08/09	185	912		540	0.73	1,900	650	1600
YC-033-3	07/08/09	253	532		507	0.48	1,300	210	510
YC-033-4	07/08/09	179	343		453	0.62	2,400	410	900
YC-033-5	07/08/09	94.5	58.5		132	0.23	21	25	52
YC-034-1	07/08/09	117	221		356	0.56	420	97	330
YC-034-2	07/08/09	176	625		436	0.85	4,300	170	760
YC-034-3	07/08/09	360	578		564	1.2	19,000	460	1700
YC-034-4	07/08/09	114	104		201	0.5	510	55	210
YC-034-5	07/08/09	61.9	7.9		59.7	0.063	0	7.2	17
YC-035-1	07/08/09	133	225		302	0.6	370	260	1300
YC-035-2	07/08/09	160	484		359	0.65	5,500	180	710
YC-035-3	07/08/09	114	482		257	0.34	41,000	190	780
YC-035-4	07/08/09	116	243		320	0.47	5,300	99	540
YC-035-5	07/08/09	57.2	22.7		64.1	0.18	180	27	57
YC-036-1	07/09/09	189	396		394	1	25,000	180	830
YC-036-2	07/09/09	250	370		296	0.74	38,000	290	1400
YC-036-3	07/09/09	252	382		300	0.25	2,100	140	680
YC-836-3	07/09/09	116	219		253	0.28	4,000	150	750
YC-036-4	07/09/09	38.4	5.7		37.3	0.087	63	23	42